REMARKS

The present invention is directed to improvement in a playback control which enables the simultaneous execution of an application during a playback of a digitized movie work, for example on a BD-ROM. And more particularly, the present invention is operable within the confines of utilizing a relatively inexpensive consumer playback apparatus while encouraging the addition of additional supplemental features that can be enjoyed by the consumer.

Frequently, a successful movie title, after a commercial release in movie theaters, can be repackaged with additional features such as additional scenes, commentary, video games and even commercial tie-ins such as selling related goods. The author of such a post-production recording medium must address the economics involved as a result of limited capacity in memory storage components to enable a relatively low cost consumer playback apparatus, and also must provide an uninterruption of the content including the main feature movie so that it can be enjoyed by the user without any apparent time lapses.

The present invention is characterized by an operation mode object for use in a movie mode (first operation mode object), an operation mode object for use in a virtual machine mode (second operation mode object), and cache management information.

The control procedure in the first operation mode object is described by directly describing a navigation command in the first operation mode object. Such a description manner of the control procedure is based on an original description manner of a control procedure of the DVD-video. Accordingly, those in charge of authoring a movie work and involved in the production of the DVD-video can author a work compatible with the DVD-video of the movie.

Generally, a reception device for digital broadcasting for Europe (DVB-MHP) employs operation control of a Java application according to the switch of services, i.e. an application signaling according to a service boundary. In accordance with the switch of titles, by describing cache management information in the second operation mode object, the recording medium according to the present invention can read files composing corresponding applications into a cache.

Accordingly, a software house using Java programming, can provide cache management information with regard to applications described in the second operation mode object, and thus, in a virtual machine mode, corresponding applications that describe the control procedure can be immediately stored into a cache. Thus, any time lag until an application activation can be reduced. More specifically, the time lag until the application activation can be reduced to the same level as the first operation mode object, in which the navigation command showing the control procedure is directly described.

Thus, a person who develops an application for DVB-MHP can still describe a control procedure that will not be inferior to what was originally produced by those in charge of authoring and involved in production of the DVD-video. Accordingly, the present invention can encourage both those in charge of authoring and involved in the production of the basic DVD-video and those in charge of developing an application for DVD-MHP to enter into the business of producing new programs for movie works, which can enhance the basic movie title.

The concept of specifying which file of those files that compose applications to be read to a cache in the second operation mode object is the cache management information defined in the present invention.

Claims 15-18 were rejected under 35 U.S.C. §102 as being anticipated by *Tsumagari et al.* (U.S. Patent Publication 2003/0161615).

> "An anticipating reference must describe the patented subject matter with sufficient clarity and detail to establish that the subject matter existed in the prior art and that such existence would be recognized by persons of ordinary skill in the field of the invention." *See In re Spada*, 911 F.2d 705, 708, 15 USPQ2d 1655, 1657 (Fed. Cir. 1990); *Diversitech Corp. v. Century Steps, Inc.*, 850 F.2d 675, 678, 7 USPQ2d 1315, 1317 (Fed. Cir. 1988).

Tsumagari et al. apparently was cited for its teaching of enhanced navigation features that permitted a user to play back contents of movie or music by a method different from that by the provider of the basic work. Thus, *Tsumagari et al.* teaches a DVD video playback player that can access ENAV contents 30 on a recording medium, that would not be accessible by a conventional DVD video specification.

The ENAV contents 30 can be classified into ENAV playback information and the data body of the ENAV content. The data body of the ENAV contents contains audio data, still image data, text data, moving image data and the like. The content of the ENAV playback information described in these languages is parsed and interpreted by an ENAV interpreter 330 in Figure 1. *Tsumagari et al.* arguably addresses the same general problem addressed by the present invention, but does it in a significantly different manner.

In defining an invention, a difficulty arises in using a two-dimensional verbal definition to represent a three-dimensional invention. To provide protection to an inventor and notification to the public, a proper interpretation of terms utilized in the claims must be adhered to in order to enable an appropriate evaluation of the invention and its scope relative to cited prior art.

Thus, not only should the concept of the invention be found in the prior art, but further, any cited structural elements in a prior art reference should be performing the same function with

the same technical understanding to a person of ordinary skill in the field as the invention claims at issue.

First, an object described in the Java language is different between the present invention and *Tsumagari et al.* According to *Tsumagari et al.*, as shown in Paragraphs 0058, 0062, 0064-0065, the ENAV playback information is configured to include markup language, script language, etc. in which the playback method of the ENAV content data body and/or the DVD video content 10 is described. For example, languages used for the playback control information is a combination of a markup language, such as HTML (Hyper Text Markup Language)/XHTML (eXtensible Hyper Text Markup Language) and SMIL (Synchronized Multimedia Integration Language), and a script language, such as ECMA (European Computer Manufacturer Association) Script and Java Script.

On the contrary, according to the present claim invention, an "application" is described in the Java language and that application instructs playback control to the playback device. Suppose the ENAV contents 30 of *Tsumagari et al.* is asserted as corresponding to this "application," *Tsumagari et al.* would then lack any corresponding element to an operation mode object. In addition, suppose the ENAV contents 30 of *Tsumagari et al.* is contended to correspond to the operation mode object, then *Tsumagari et al.* would lack any teaching of what could correspond to the "application" of the present invention.

Second, the instruction provided to the playback device is different between the present invention and *Tsumagari et al.* According to *Tsumagari et al.*, as shown in Paragraph 0067, the ENAV playback information contains file information, layout information, size information, and synchronization information with regard to the ENAV content. The file information is information showing which file is to be referred. If the file to be referred is not present, or if the

file to be referred is present but the playback device does not have a functional ability to decode the file, then the file information would show another file to be referred instead. Thus, what is instructed from the ENAV playback information to the playback device is which file to be referred, or which other file is to be referred when the original file cannot be decoded. The ENAV playback information according to *Tsumagari et al.* does not instruct the playback device to read which file of a plurality of files composing applications stored in a cache. Accordingly, since the ENAV playback information cannot be construed to include cache management information of our invention, it cannot be considered to teach to a person of ordinary skill in this field that the ENAV playback information of *Tsumagari et al.* could correspond to an operation mode object.

Third, *Tsumagari et al.* lacks any disclosure of a cache. In addition, the playback device of Tsumagari does not teach any kind of control information to be read into a cache. Then, as a matter of course, the ENAV playback information of the ENAV contents 30 of *Tsumagari et al.* cannot be the target to be read into a cache.

Although the ENAV playback control information of the ENAV contents 30 is described in the Java Script, the ENAV playback control information is not read into a cache. According to *Tsumagari et al.*, what is described in the Java language is different, and the instruction to the playback device is different than our claims. In addition, *Tsumagari et al.* is silent with regard to any reading of content into a cache. Thus, according to *Tsumagari et al.*, the ENAV playback information in ENAV contents 30 is not read into the cache. Accordingly, *Tsumagari et al.* does not disclose the first operation mode object, the operation mode objet for a virtual machine mode or the cache management information as defined in our claims.

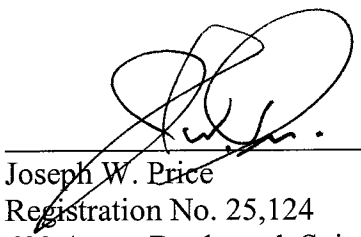
The present invention has the following technical advantages. Even when those who develop an application for DVB-MHP produces the first operation mode object, the second operation mode object or the cache management information, they can describe a control procedure that is not inferior to what was produced by those in charge of authoring and involved in the production of a DVD-video. Since such a technical significance can never be achieved from *Tsumagari et al.*, our present invention with the above features would not occur to those of ordinary skill in the art. Accordingly, it is believed that all the features contained in the present invention are not anticipated by *Tsumagari et al.*

Applicant submits that the present application is allowable and requests an early notice of allowance.

If there any questions with regards to the prosecution of the application, the undersigned attorney can be contacted at the listed telephone number.

Very truly yours,

SNELL & WILMER L.L.P.



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